BC Biomedical
A Unit of BC Group International, Inc.

PULSE OXIMETER SIMULATOR

SPO-2000

USER MANUAL

BC BIOMEDICAL
SPO-2000
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Manual SPO-2000
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Rev 02

BC GROUP
SPO-2000
PULSE OXIMETER SIMULATOR

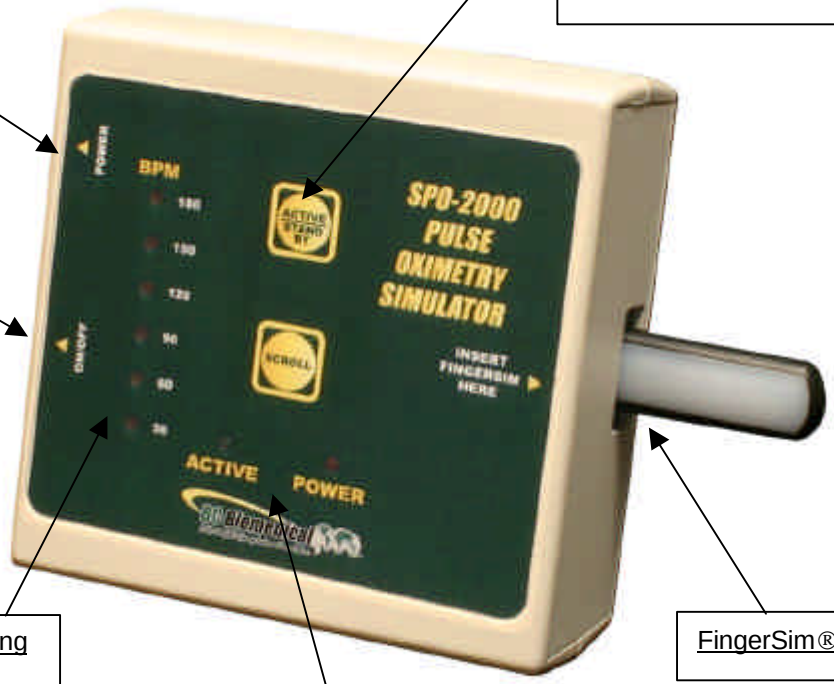
The SPO-2000 is a microprocessor based pulse generator capable of calibrating any phantom finger based heart rate monitor.

The unit has six available pulse rates ranging from 30 to 180 BPM. Each pulse rate has a unique LED indicator.

The SPO-2000 is designed to work in conjunction with the FingerSim® manufactured by BC Biomedical and available from BC Group International. The FingerSim® is used to verify the operation of pulse oximeters. The SPO-2000 adds calibrated pulse rates to the functionality of the FingerSims®.

OVERVIEW

This section looks at the layout of the SPO-2000 and gives descriptions of the elements that are present.



2 Light Touch Keys
ACTIVE/STANDBY for Controlling the Power Generator.
SCROLL for selecting the Pulse Rate.

Connector for Power Transformer

ON/OFF Switch

6 LEDs for Indicating Pulse Rate (BPM)

2 LEDs for Indicating Status
ACTIVE for showing when the Power Generator is active.
POWER for showing when the Unit is On.

FingerSim® Holder

KEYS

2 soft touch keys are provided for unit operation:

– This key is used to turn the pulse generator output ON and OFF.

– This key is used to select the desired pulse rate.

LED INDICATORS

There are eight LEDs to indicate the status of the system. They are marked POWER, ACTIVE, 30, 60, 90, 120, 150, AND 180.

POWER – This LED indicates that the power switch is turned ON and the on board power supply is functioning properly.

ACTIVE– This LED indicates that the system is in the ACTIVE mode and the solenoid is being pulsed at the currently selected heart rate.

30 – This LED indicates that the currently selected heart rate is 30 BPM. This is the heart rate that is selected when the system is first turned ON.

60 – This LED indicates that the currently selected heart rate is 60 BPM.

90 – This LED indicates that the currently selected heart rate is 90 BPM.

120 – This LED indicates that the currently selected heart rate is 120 BPM.

150 – This LED indicates that the currently selected heart rate is 150 BPM.

180 – This LED indicates that the currently selected heart rate is 180 BPM.

OPERATIONS

When the system is first turned on the SPO-2000 will start in the standby mode with a heart rate of 30 BPM.

Insert the desired FingerSim® into the rectangular opening on the SPO-2000.

NOTE: It is recommended that the FingerSim® be inserted with the printed side down to minimize wear on the printing by the mechanism inside the SPO-2000.

Use the

key to select the desired pulse rate. Then the output is enabled by depressing the

key. The ACTIVE LED will turn on and the FingerSim® will pulse at the desired rate.

The pulse rate can be changed by depressing the

key, in either the ACTIVE or STANDBY mode.

Connect the finger probe of the pulse oximeter being tested to the FingerSim®. Run the probe's cable underneath the SPO-2000.

The output is disabled by depressing the

key. The ACTIVE LED will turn off and the Phantom Finger will stop pulsing.

NOTE: The accuracy of the saturation percentage on the pulse oximeter being tested is a function of the FingerSim® - not the SPO-2000. The SPO-2000 only controls the pulse rate. See the user information included with the FingerSim® for accuracy and related data.

MANUAL REVISIONS

Revision #	Program #	Revisions Made
Rev 01	DT7300CA	Original BC Manual
Rev 02	DT7300PGA	Updated to new format

LIMITED WARRANTY

WARRANTY: **BC GROUP INTERNATIONAL, INC.** WARRANTS ITS NEW PRODUCTS TO BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP UNDER THE SERVICE FOR WHICH THEY ARE INTENDED. THIS WARRANTY IS EFFECTIVE FOR TWELVE MONTHS FROM THE DATE OF SHIPMENT.

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SPECIFICATIONS

Physical	
ENCLOSURE	5.07 x 5.08 x 2.25 Inches (128.78 x 129.03 x 57.15 mm) ABS Plastic
WEIGHT	≤ 1 Lbs (≤ 0.45 Kg)
FACE PLATE	Lexan, Back printed
OPERATING RANGE	15 to 40 C
STORAGE RANGE	-20 to 65 C

Electrical	
POWER	12V, 600 mA DC

NOTES